

Remarks

Applicants appreciate the recognition of patentable subject matter in the present application.

Applicant hereby adds new claims 32-39 and cancels claims 8 and 15. Accordingly, claims 1-7, 9-14 and 16-39 are pending in the present application.

Claims 1-2, 4-7, 11-12, 16-17, 20, 22-24 and 29-31 stand rejected under 35 USC 102(e) for anticipation by U.S. Patent No. 6,731,821 B1 to Mauer et al.

Applicants respectfully request reconsideration of the rejections.

Claim 1 recites the *processing circuitry is configured to perform the single processing operation to denoise and sharpen the image data of the pixel locations*. The Office relies upon the teachings in col. 6, lines 33-48 of Mauer as allegedly teaching the above-recited limitations. The teachings of col. 6, lines 33+ of Mauer disclose use of a *robust anisotropic diffusion (RAD) filter to smooth data*. The teachings in col. 6, lines 33-48 of Mauer are void of teaching sharpening operations. The application of the RAD filter in a single iteration to a 3x3 neighborhood refers to smoothing without sharpening and fails to teach the claimed limitations of the *single processing operation to denoise and sharpen the image data*. Mauer teaches at col. 4, lines 44+, the use of *variable contrast stretching to provide sharpening*. Furthermore, Mauer teaches input image data or pixels (I or P), smoothed data or pixels (I' or P') and sharpened data or pixels (I'' or P''). *Separate processing operations* of RAD filtering and variable contrast stretching are disclosed in the embodiments of Figs. 1, 4, 5 and 6 of Mauer to provide the smoothed data or pixels I' or P' and to provide the sharpened data or pixels I'' or P''.

Applicants respectfully assert that the claimed processing circuitry configured to perform the *single processing operation to denoise and sharpen the image data of the pixel locations* is not disclosed by Mauer. Applicants respectfully request reconsideration of the 102 rejection for at least these reasons and allowance of claim 1 in the next Action.

The claims which depend from claim 1 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

For example, referring to dependent claim 4, the Office relies upon the teachings of col. 9, lines 40+ of Mauer in support of the rejection. Such teachings

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disclose processing color data by providing the color data in YCC color space and *smoothing and sharpening only the luminance channel*. Applicants respectfully submit that the smoothing and sharpening only the luminance channel of Mauer fails to teach or suggest the *processing circuitry configured to perform the single processing operation using the image data comprising information regarding a plurality of colors at individual ones of the pixel locations* as defined in claim 4. Allowance of claim 4 is respectfully requested.

Referring to independent claim 7, the digital imaging system recites limitations of claim 8. Claim 7 is believed to be allowable in view of the indicated allowability of claim 8. Allowance of claim 7 is respectfully requested.

The claims which depend from claim 7 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Referring to independent claim 12, the article of manufacture recites limitations of claim 15. Claim 12 is believed to be allowable in view of the indicated allowability of claim 15. Allowance of claim 12 is respectfully requested.

The claims which depend from claim 12 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Referring to independent claim 17, the method recites *processing the image data comprising sharpening and denoising the image data using a robust estimation filter*. At page 6 of the Office Action, the Office identifies the RAD or Robust-Anisotropic-Diffusion filtering as teaching the claimed robust estimation filter. However, Mauer at col. 6, lines 33+ teaches that the RAD filter is used for *smoothing* and Applicants have failed to uncover any teaching that the RAD filter is used for *sharpening*. To the contrary, Mauer explicitly teaches the use of the *variable contrast stretch of col. 4, lines 45+ to provide sharpening*.

Furthermore, the Office relies upon the teachings of col. 8, lines 10+ in support of the rejection. However, such teachings expressly disclose use of the RAD filter function of Eq. 4 to generate a *smoothed pixel* at col. 8, line 18 in combination with teaching the use of a *contrast stretching operation* of Eq. 1 to generate a *sharpened pixel*.

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Applicants respectfully submit that the use of the different equations to perform the smoothing and sharpening of Mauer fails to teach or suggest the claimed limitations of *processing the image data comprising sharpening and denoising the image data using a robust estimation filter*.

Applicants respectfully request reconsideration of the 102 rejection for at least these reasons and allowance of claim 17 in the next Action.

The claims which depend from claim 17 are in condition for allowance for the reasons discussed above with respect to the independent claim as well as for their own respective features which are neither shown nor suggested by the cited art.

Referring to dependent claim 20, the use of the RAD filter and variable contrast stretching of Mauer to perform the smoothing and sharpening fails to teach or suggest the processing comprising *sharpening and denoising the image data in a single processing operation* as claimed. Applicants respectfully submit that claim 20 is allowable.

Referring to dependent claim 31, Applicants have failed to uncover any teachings in Figs. 4 and 7 of the claimed *selecting one of the sharpening and denoising responsive to the comparing image data of the one pixel location with image data of another of the pixel locations* as claimed. Applicants respectfully submit that claim 31 is allowable.

Applicants hereby add new claims 32-39. New claims 32, 33, 34 include the limitations of respective dependent claims 10, 13, 14 and the respective base claims from which they depend. New claims 35-39 are supported at least by the teachings of paragraphs 36-43 and 69.

Applicant respectfully requests allowance of all pending claims.

The Examiner is requested to phone the undersigned if the Examiner believes such would facilitate prosecution of the present application. The undersigned is available for telephone consultation at any time during normal business hours (Pacific Time Zone).

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